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A Usage-based Account of the Acquisition of English *Get*-passives*

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1. Introduction

This paper aims to demonstrate that the *get*-passive, a form of so-called "middle voice" in English, plays a part in children's acquisition of transitive and unaccusative verbs, based on the data and analysis of children's and adults' utterances that involve *get*-passives collected from the CHILDES database. The quantitative research presented here will also illuminate some other aspects of language acquisition, including the nature of input, its effect on the output, and the gradual progress of learning from specific items to more schematic constructions as claimed by usage-based accounts of acquisition of grammar (Tomasello 2003, Goldberg 2006).

2. Previous studies on acquisition of transitive-intransitive alternations

First, as background of this paper I would like to observe what is at issue in dealing with the acquisition of the transitive-unaccusative alternation. Although this alternation pattern is one of the most basic ones in English verbal systems, it is presumably not straightforward for English-speaking children since it does not involve any morphosyntactic marker, such as reflexive clitics in Romance languages. Therefore, children are required to learn without any overt clues what transitive verbs have unaccusative alternations.

In fact, many previous studies of language acquisition have mainly discussed "transitive errors" such as *Don't giggle me*, where children use non-alternating intransitives as transitives. However, it has also been indicated that English-speaking children do make "intransitive errors." Lord (1979) shows interesting examples, as in (1):

(1) a. [2;9] I can't hear it. (puts clock to ear) It can hear now.
b. [3;1] (pulls on M's hand, M does not move) Pull. Pull! Come on!
c. [3;3] We have two kinds of corn: popcorn, and corn. Popcorn: it crunches. And corn doesn't crunch; it eats!

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d. [3:7] I think I better put it down there so it won't lose.
e. [3;8] They don't seem to see. Where are they?

These examples may sound like middle constructions such as *this book sells well*, since the transitives used in (1) do not have unaccusative counterparts. As Lord herself suggests, this kind of errors is presumably brought about by analogy with the canonical transitive-unaccusative alternation like *open*; it is plausible for children to assume that, if one can say *I cannot open it. It can open now*, then *I cannot hear it. It can hear now* is also possible. Due to the lack of formal distinctions, children are forced to infer and learn what transitive verbs can be altered into unaccusatives only on a semantic basis.

Budwig *et al*. (2001) observe children's spontaneous utterances during play to characterize their uses of active intransitives and middle (unaccusative) intransitives. They propose that unaccusative intransitives with non-agent subjects are used in the situation described in (2):

(2) Non-agent subjects found in middle constructions linked up with utterances that functioned to mark goal-blocking or resistance from the environment. These spontaneous mentions most occurred when children were manipulating objects, but also often were found just after the children stopped manipulating objects.

(Budwig *et al*. 2001: 61)

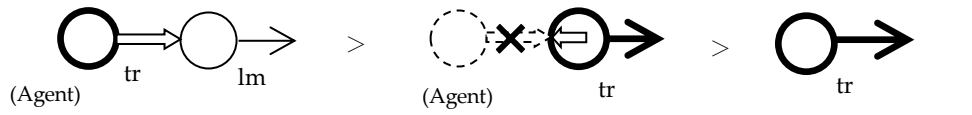
If unaccusatives are used when children experience goal-blocking or resistance from the environment, it is expected that the utterances including unaccusatives are of negative forms, such as *this won't open*. Note that this can be regarded as an instance of middle constructions in that it strongly implies the existence of the agent, who is the child herself and intends the act of opening something.

The proposal made by Budwig *et al*. seems reasonable in terms of correlations of event construal and grammatical relations (Langacker 1991). Here, I would like to adopt Langacker's model of "action chain" as in Figure 1, where circles represent participants, double arrows indicate transmission of energy, and single arrows indicate change of location or state. The most salient participant, called "trajector (tr)," is syntactically linked with the clausal subject. The next most salient participant is called "landmark (lm)," linked with the clausal object. In a prototypical transitive event, the agent is most likely to be the trajector, since it is a human and energetic participant that attracts our attention.

Let us now consider the process of learning English verbs in terms of event construal. First, children learn a prototypical transitive event where the agent is the child herself (cf. Slobin 1981). As for intransitives, unergatives are rather straightforward because their

subjects are agentive, exerting their own energy, just as in the transitive event. On the other hand, events denoted by unaccusatives are composed of the same participants and relations as transitive events, but need to exclude the agent from the scope. This will be difficult at first for children, since they are forced to eliminate the most salient participant and shift the focus to the object of their action. The middle situation suggested by Budwig *et al*. (2001) is useful to shift the focus to the object, which is perceived as exerting force to block children's action. Also, because children are likely to attribute the failure of their intended act to the object, they focus on the object's responsibility and at the same time, background their own responsibility.

Thus, I hypothesize that the middle situation in Figure 1 (b), which includes an implicit agent in its scope, bridges the gap between transitives in Figure 1 (a) and unaccusatives in Figure 1 (c) and makes it easier for children to shift the focus away from the agent.



(a) transitive (b) middle (c) unaccusative

Figure 1

Note that the middle situation in Figure 1 (b) can be described by several kinds of verbs or constructions, all of which I would like to refer to as forms of "middle voice." In fact, Alexiadou (2012) claims that there are three forms of middle voice in English: anticausative, dispositional, and the *get*-passive. The anticausative and dispositional correspond to unaccusative and middle constructions respectively. Although the middle voice in English is not as dominant as the active and passive voice and it cannot be reduced to a single form, it surely plays an important role in children's acquisition of unaccusative alternations, as will be shown in the case studies that follow.

3. The unaccusative use of *open*: Taniguchi (2011)

While the claims of Lord and Budwig *et al*. are based on limited observations of a small number of children, Taniguchi (2011) examines the validity of the above hypothesis by quantitative research using the CHILDES database. I collected all utterances of children and adults speaking American and British English that include the unaccusative *open* with inanimate subjects. If the claim of Budwig *et al*. (2001) stated in (2) is correct, we can predict that the unaccusative *open* often appears in negative forms.

Here I briefly show the results. Among 123 utterances of children and 142 utterances of adults, most imply that the children themselves are agents of the act of opening

something and thus correspond to the middle situation depicted in Figure 1. Remarkably, both in the children's and adults' utterances, affirmative forms are limited, 26 percent and 16 percent respectively. As for the children's utterances, the most dominant ones are interrogative (e.g., *Does it open?*), which occupy nearly half of the total, and 28 percent are negative, such as *It doesn't open*. In the adults' utterances, 63 percent are negative and 20 percent are interrogative. Thus, the adults' utterances evidently exhibit a phenomenon called "skewed input."

This result partly supports the proposal of Budwig *et al*. that children produce unaccusative intransitives when their goal of action is blocked. However, there seems to be another situation that motivates the unaccusative use of *open*. Actually, frequently-used utterance forms can be motivated in terms of their pragmatic, interpersonal functions; adults often say to children, *It doesn't open* because they prohibit the children's act of opening (and children love to open things). Also, children often say to adults, *Does it open?* to ask permission. Either way, these utterances are regarded as middle-voice ones with the implication of the agent (i.e., the children) and support the view of the learning processes depicted in Figure 1.

4. The *get*-passive and middle voice

Another phenomenon that supports the hypothesis sketched in Figure 1 is the acquisition of the *get*-passives Here I would like to confirm that it can be regarded as one of the middle-voice forms judging from its semantic properties.

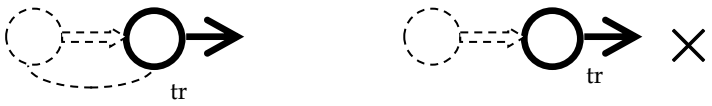
As a matter of fact, given the definition that the middle voice refers to a sentence where syntactically active subjects are semantically affected by the action of the verb (Klainman 1988; Arce-Arenales *et al*. 1994), the *get*-passive might well be regarded as a form of middle voice. As a piece of evidence, Arce-Arenales *et al*. (1994) point out that a typical marker of middle voice, the Spanish reflexive *se*, is largely parallel to the English *get*-passive: they both function to intransitivize transitive verbs, mark a reflexive situation, and passivize.

(3) a. La puerta se abrió. (intransitive)
the door SE opened 'The door opened.'
b. Juan se mató. (reflexive/passive)
Juan SE killed 'Juan killed himself' or 'Juan was killed (by someone).'
c. Esta fruta se llama aguacate. (passive)
this fruit SE calls avocado 'This fruit is called avocado.'

Moreover, an array of previous studies have shown that the current English *get*-passives have characteristics that distinguish them from *be*-passives, as listed below:

(4) a. Implication of adversity on the part of the passive subject (e.g., *get hit, get hurt*)
b. The subject of the *get*-passive regarded as responsible for the occurrence of the event
c. Representation of the agent in the *by*-phrase is only marginal
d. Intransitivizing transitive verbs that do not have unaccusative counterparts (e.g., *get dressed*)
e. Inchoative aspect in contrast to the stative aspect of *be*-passive

Based on these characteristics, I posit two types of the *get*-passive: one is "reflexive," where two participants are co-indexed, as in "get dressed"; the other is "adversative," which involves two distinct participants, an implied agent and a patient, as well as a negative effect on the patient. In the latter case, the passive subject is often human and responsible for the occurrence of the event, as in *He got hit by a car*.



(a) reflexive (b) adversative

Figure 2

It is clear that both of these two types of *get*-passives correspond to the middle situation in Figure 1; if so, it can be assumed that the *get*-passive also plays a role in acquisition, and children make use of *get*-passives at a certain stage of their development.

As for the matter of acquisition, some previous studies on passives have already shown the important role of *get*-passives, which seem to be learned earlier than *be*-passives. According to Slobin (1994), the prototype of the *get*-passive is the *get*-inchoative with adjectival past participles, which is acquired by age 3, and children at age 4 come to use full *get*-passives and *be*-passives. Also, Israel *et al*. (2000) show that children use *get*-passives earlier than eventive *be*-passives. These findings suggest the advantage and priority of *get*-passives in children's acquisition of passive forms.

In what follows, I will discuss children's use of *get*-passives, again based on the CHILDES database. I will point out some tendencies and characteristics observable in utterances of adults and children, as well as the unique function of *get*-passives in the process of acquisition.

5. Data and discussion

The data is based on the US corpora in CHILDES downloaded in 2012. I collected children's and adults' utterances that include either the present-tense form *get* or the past-tense form *got* plus past participles. In coding the data, I basically did not distinguish

past participles into passive and adjectival ones. Some may feel that *get scared*, *get married*, *get involved* are rather adjectival. In fact, however, this issue is quite controversial because these syntactic statuses are ambiguous and much depends on the degree of entrenchment. That is, if a deverbal participle is used often and is entrenched, it will behave as adjective. Especially, as Israel *et al*. (2000) also mention, children's use of past participles is often ambiguous between deverbal and adjectival. Therefore, the data I present here does not exclude participles that seem to be adjectival as well.

5.1 Adults' utterances

First, let us begin by adults' data on the *get*-passive. In Figure 3, 2033 utterances are classified according to the participles involved. Clearly, this distribution shows skewed input, especially the frequent use of *get hurt*. The dark bars in the graph represent the top four participles: *hurt, dressed, stuck,* and *lost*. Note that these four alone occupy 36.8 percent, though there are as many as 268 past participles.

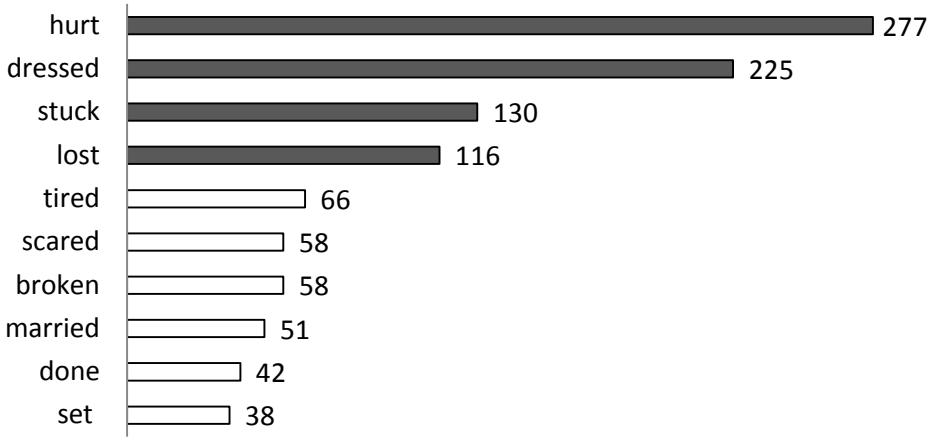


Figure 3: adults' utterances of *get*-passives

These top four frequent past participles actually correspond to both of the two types of the *get*-passive: *get dressed* is reflexive, and *get hurt* is adversative. *Get stuck* and *get lost* may seem to lack the implication of a specific agent, but surely they imply adversity on the part of the passive subject. Thus, these four participles exhibit skewed input in frequency, but in terms of quality they constitute quite well-balanced input.

Also, what is notable is the adults' frequent use of *get broken*, which is almost equivalent to the unaccusative *break*. The number of the tokens (58 instances) is outstandingly larger than that of COCA (Corpus of Contemporary American English), where I observe only fifteen instances of *get*-passives.[1] Though the corpora of COCA and CHILDES are different in terms of registers, the topic they are talking about and so on, the top four participles in

CHILDES also rank relatively high in COCA. This suggests that the adults' frequent use of *get broken*, which functions as substitute for the unaccusative *break,* is one of the characteristics of their child-directed speech.[2]

The facts observed here lead us to assume that adults adopt a kind of grammatical "motherese" to serve the purpose of facilitating children's acquisition of grammar. Therefore, the quality of input children receive from their caregivers is not so impoverished as generative grammar claims; as Cameron-Faulkner *et al*. (2003) point out, child-directed speech involves significant characteristics that are not observable in conversations among adults and contribute to children's learning of specific lexical items and grammatical forms.[3]

5.2 Children's utterances

Let us move on to the children's data. Figure 4 below shows the distribution of utterances according to age. We can observe more utterances of *get*-passives at ages 3 and 4. Certainly it might be that the corpora itself include more data from children of these ages, but it can be seen at least that children at these ages productively use *get*-passives.[4]

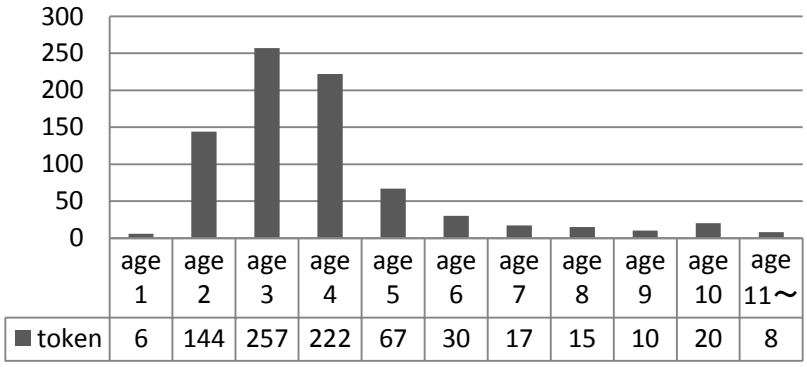


Figure 4: children's utterances of *get*-passives

Let us now look at the distribution of the past participles included in the children's utterances at each age. The graphs show the token numbers of past participles that occur in more than two utterances.

What is notable in the data of 2-year-old children is that *get hurt* is outstandingly frequent, and the adults' four frequent participles all rank on top, as shown by the dark bars. In addition, note the frequent use of *get broken* at age 2; this might be regarded as a substitute for the unaccusative *break*, considering the fact that 2-year-old children have not fully acquired the transitive-unaccusative alternation yet. Also, 3-year children often use the adult's frequent participles, as well as *get broken*.

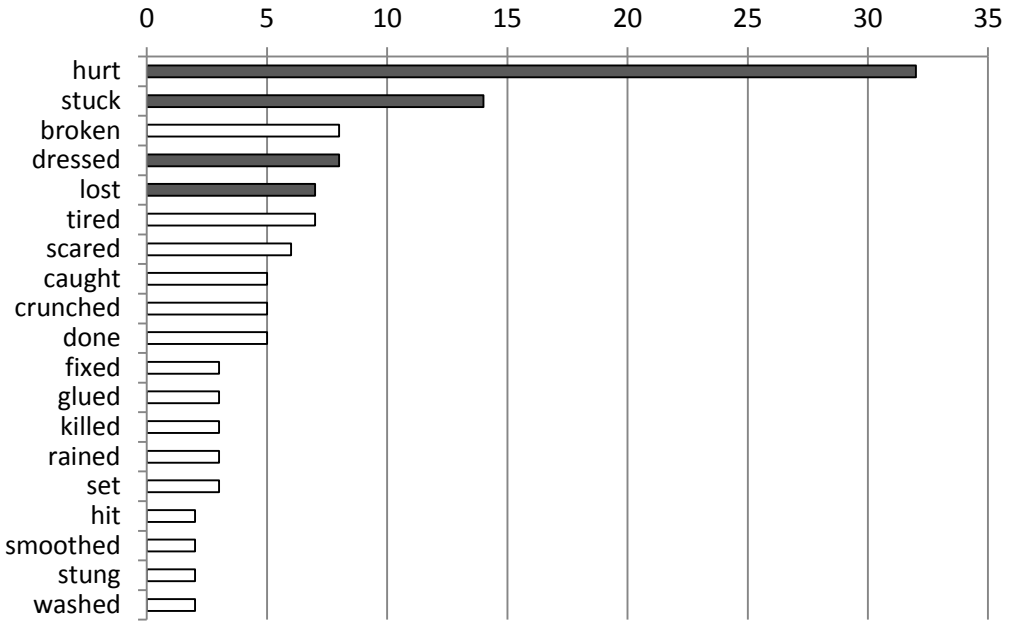


Figure 5: age 2

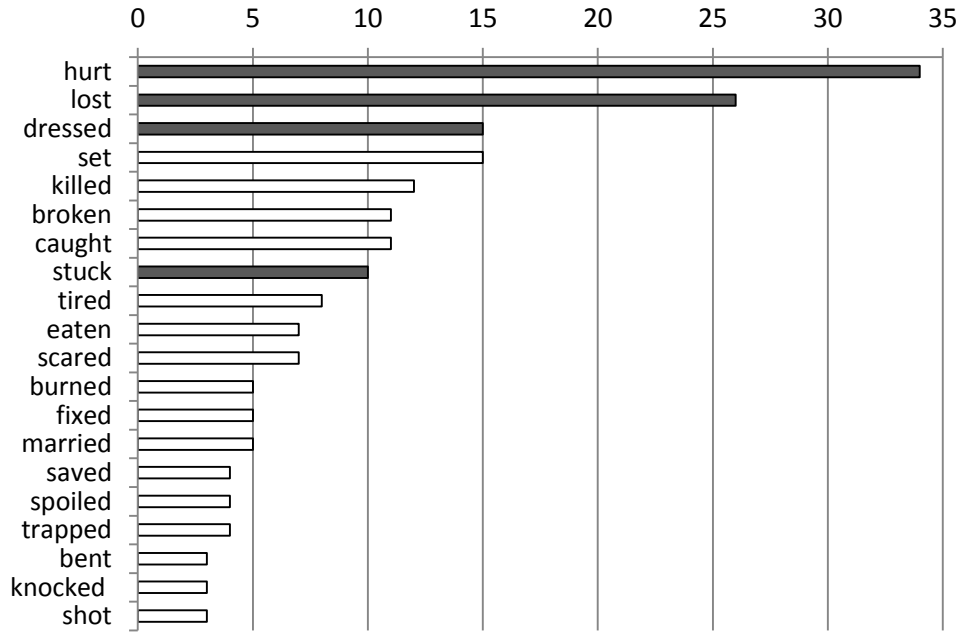


Figure 6: age 3

Next, 4-year-old children's utterances include a greater variety of participles, up to 83. The adults' four frequent participles still rank high, but more instances seem to be passive ones, like *get killed*, *get shot*, *get run over*. In 5-year-old children's data, at a glance, the number of past participles seems smaller, but out of the total 34, 22 instances do not appear

in the graph since they occur in just a single utterance. At this stage, the adults' four frequent participles withdraw, and collocation of *get*-passives with particular participles is less strong. This suggests that the "*get*-passive construction" is established around this age, and can be combined with various kinds of past participles. Furthermore, at age 5 *get broken* is no longer observed. This may be partly because children at this age have learned the transitive-unaccusative alternation and have started to use the unaccusative *break* instead of *get broken*. Finally, at age 6 and older little skewing is observed among the participles.

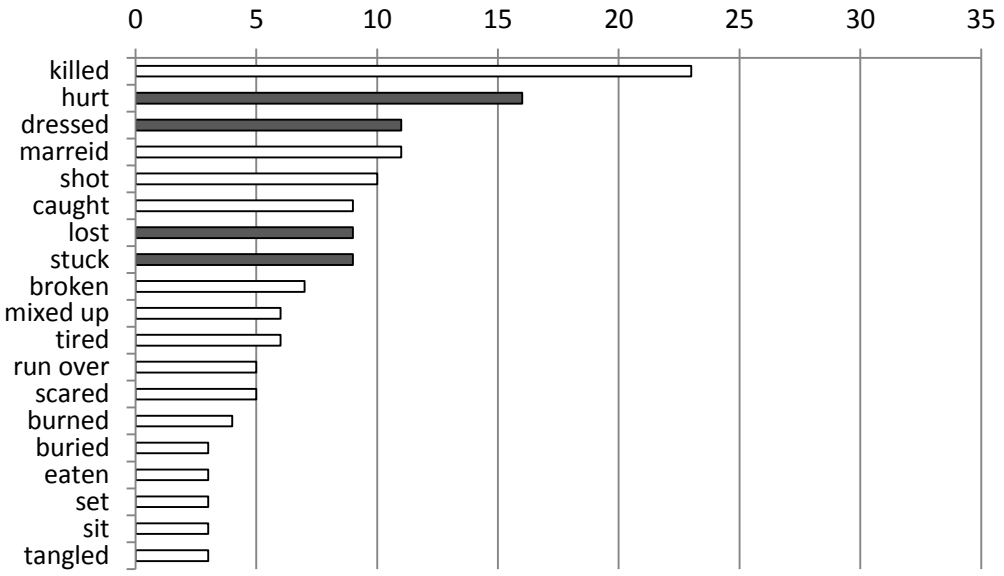


Figure 7: age 4

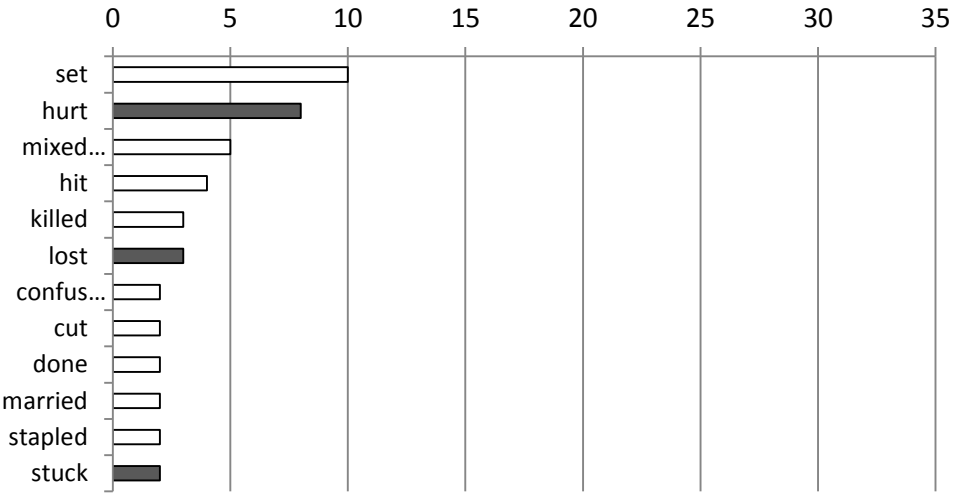


Figure 8: age 5

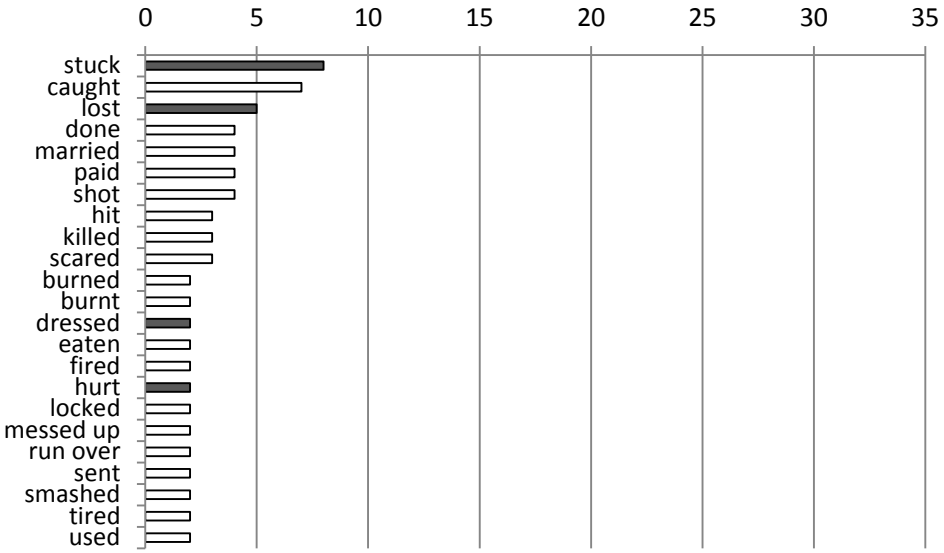


Figure 9: age 6 and older

Table 1

Age	utterances	p. p.	SD
2	144	43	5.193393
3	257	75	**5.521288**
4	222	83	3.662387
5	67	34	2.007124
6～	100	57	1.45311

The transition of children's use of the *get*-passive observed above suggests that, while children at ages of 2 and 3 are "conservative learners" whose output directly reflects the input they receive (Goldberg 2006), children at age 4 begin to generalize the instances and acquire the schematic template of the [*get* + past participle] construction. This also accords with Tomasello's (2003) usage-based view, which assumes that children start with learning verb-specific expressions and gradually recognize the syntactic patterns shared by verb classes. See Table 1 that summarizes the result together with the standard deviation among the past participles. The deviation is high at around ages 2 and 3 and becomes smaller as the children get older. This distribution shows that *get*-passives are rather item-specific at ages 2 and 3, and that gradually schematic constructions appear, possibly at around age 5. Not all of the early-acquired instances of *get*-passives are entrenched as such; some may be replaced by other alternatives such as unaccusatives or *be*-passives that children acquire later, and thus the chances of using *get*-passives decrease as children get older.

5.3 Idiosyncratic instances: redundant *get*

Finally, I would like to present some interesting errors children make when they are around 3 and 4 years old. The *get*-passives in (5) use past participles of intransitives, and therefore *get* is redundant.

(5) a. [2;10] it *got rained* in there.
b. [3;7] he *get died*.
c. [4;4] I think a bird was up on the light and it fell down and *it got died*.
d. [3;10] the finger gets healed when the band aids *get healed*.
e. [4;2] got to sleep and I *got waked up* in the morning.
f. [3;7] but I went to a park and I *got played* in the sand.

Note that such redundant *get* cannot be observed in adults' utterances. Thus, this kind of error may suggest that *get* is overgeneralized and utilized broadly as an intransitive marker before children acquire the patterns of transitive-unaccusative alternations, though this remains speculative and needs further investigation in relation to the acquisition of unaccusatives.

6. Conclusion

This paper has shown the process of children's leaning of the *get*-passive in detail, and suggests the possibility that the *get*-passive plays the important role of bridging from transitives to unaccusatives, as well as from active to passive voice, from stative to eventive passives as suggested by previous studies. This provides another support for the hypothesis that the middle is utilized in the course of acquisition of unaccusative alternations as depicted in Figure 1.

As a final remark, I would like to mention the validity of the quantitative, usage-based approach to language acquisition presented here. For one thing, the data of children's utterances involving the *get*-passive supports the view of usage-based model that children gradually learn grammatical constructions by abstracting away from item-specific expressions. In addition, this paper has demonstrated correlations between children's output on the one hand and input they receive on the other, especially during the period of early conservative learning. In particular, this study has revealed an aspect of adults' utterances that exhibit intriguing characteristics such as skewed input and "grammatical motherese;" it can be assumed that devices like these serve to facilitate acquisition by providing significant information concerning grammar in a way that attracts children's attention. In this regard, the study will contribute to arguing for "richness" of input children receive from adults, offering a solution to the problem of "poverty of stimulus." [5]

Notes

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1. The investigation using COCA collected instances of *get*-passives appearing in sentence-final positions and including either past participles or adjectival ones since morphological tags in COCA are often ambiguous between the two; for instance, in the case of *married* in *get married*, 2,465 instances are marked as past participles whereas 209 are marked as adjectives.
2. What brings about such preference for *get*-passives over unaccusatives might be that the periphrastic forms like *get broken* are more unambiguous than unaccusatives (which are morphologically identical to transitives) and signal a middle situation in an explicit way. A similar phenomenon is observed in Taniguchi (2011): the unaccusative *move* often appear in periphrastic causatives [*make* O *move*] in adults' and children's utterances.
3. For example, Cameron-Faulkner *et al*. (2003: 846) observe that child-directed speech contains fewer false starts and hesitations, more grammatically correct expressions than speech between adults, skewed input, and fewer complex sentences.
4. In fact, there are 1,050 instances of children's utterances, but here I employed only the 790 instances where the speakers' ages can be identified. The numbers of the tokens shown here are slight modifications of those presented in Taniguchi (2014a) after closer examinations of the data.
5. See Evans (2014) for detailed discussions on this issue.

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get-passive の習得に関する考察
―使用基盤モデルの観点から―

谷口 一美

本論稿は、英語の *get*-passive の習得過程の観察に基づき、構文および文法の獲得の諸側面について使用基盤モデルの立場から考察する。谷口 (2011) は、英語の動詞の自他交替の習得において、こども自身が動作主であることを含意する中間態の使用段階が介在する可能性を示したが、*get*-passive も英語での中間態の一形式であるとみなされており、また受動態の習得に関する先行研究でも、*be*-passive よりも *get*-passive が早く獲得されることが指摘されている。このため本論稿は *get*-passive に着目し、この形式が動詞の用法や構文の習得において果たす役割を示すことを試みたものである。本論稿は、データベース CHILDES からこどもと大人の発話を収集し、それらの発話数および共起する過去分詞の分布から *get*-passive の使用状況を明らかにし、特に習得初期段階で優勢的に用いられる *get*-passive が果たす機能について考察する。本論稿で提示するデータは、こどもが語彙的に固定化された表現をはじめに習得し、それらに共通する項構造を抽出することで徐々に構文が獲得されるという使用基盤モデルの見方を支持しており、大人の発話に見られるインプットの特性およびこどもによるアウトプットとの相関に関しても示唆を与えるものである。